

WHAT IS CLAIMED IS:

- 1 1. A fuel tank system for a work vehicle, comprising:
2 a first fuel tank having a first fuel outlet disposed on a lower portion
3 thereof;
4 a second fuel tank having a second fuel outlet disposed on a lower portion
5 thereof;
6 a cross feed line having an inner diameter and coupled to and between the
7 first and second outlets; and
8 a check valve disposed in the cross feed line to block fuel from flowing
9 through the cross feed line from the second tank to the first tank.
- 1 2. The fuel tank system of Claim 1 wherein the check valve comprises:
2 an annulus having an outer diameter and defining a circular opening; and
3 a valve element pivotally coupled to the annulus and sized to seal against
4 and block the circular opening in a first pivotal position and to open in a second pivotal
5 position.
- 1 3. The fuel tank system of Claim 2, wherein the annulus defines a generally
2 circular sealing surface disposed about a circumference thereof and the valve element
3 defines a generally circular sealing surface disposed about the periphery thereof and
4 configured to abut and seal against the generally circular sealing surface of the annulus.
- 1 4. The fuel tank system of Claim 3, further comprising a clamp extending
2 around an outer circumference of the cross feed line and disposed to compress the cross
3 feed line against the annulus.
- 1 5. The fuel tank system of Claim 4, wherein the valve element comprises a
2 substantially planar and circular polymeric sheet having an upper portion, a lower
3 portion, and a polymeric hinge portion formed integral with and coupling the upper and
4 lower portions.

1 6. The fuel tank system of Claim 5, wherein the valve element further
2 includes at least one planar stiffener sheet fixed to the lower portion of the circular
3 polymeric sheet.

1 7. The fuel tank system of Claim 6, wherein the stiffener sheet is
2 substantially coplanar with the lower portion and is fixed to one side of the lower portion.

1 8. The fuel tank system of Claim 7, wherein an upper portion of the annulus
2 has a radial thickness greater than a lower portion of the annulus, and wherein the greater
3 thickness is sufficient to anchor the upper portion of the circular polymeric sheet.

1 9. The fuel tank system of Claim 8, wherein the upper portion of the circular
2 polymeric sheet is coupled to the upper portion of the annulus by at least one fastener.

1 10. The fuel tank system of Claim 9 wherein the valve element is disposed to
2 open in response to pressure provided by the weight of fuel from the first tank acting
3 against the valve element and further wherein the valve element is disposed to close in
4 response to the weight of fuel from the second tank acting against the valve element.

1 11. A flapper valve for a fuel tank system comprising:
2 a polymeric annulus having a width in an axial direction greater than a
3 thickness in a radial direction; and
4 a generally planar valve element including an upper portion fixed to the
5 annulus and a lower portion configured to pivot with respect to the annulus, thereby
6 providing a fluid passageway between the annulus and the valve element.

1 12. The valve of Claim 11, wherein the valve element comprises a
2 substantially planar and circular polymeric sheet having an upper portion, a lower
3 portion, and a polymeric hinge portion formed integral with and coupling the upper and
4 lower portions.

1 13. The valve of Claim 12, wherein the valve element further includes at least
2 one planar stiffener sheet fixed to the lower portion of the circular polymeric sheet.

1 14. The valve of Claim 13, wherein the stiffener sheet is substantially coplanar
2 with the lower portion and is fixed to one side of the lower portion.

1 15. The valve of Claim 14, wherein an upper portion of the annulus has a
2 radial thickness greater than a lower portion of the annulus, wherein the greater thickness
3 is sufficient to anchor the upper portion of the circular polymeric sheet to the annulus.

1 16. The valve of Claim 15, wherein the upper portion of the circular
2 polymeric sheet is coupled to the upper portion of the annulus by at least one fastener.

1 17. The valve of Claim 16, further comprising a second stiffener sheet fixed to
2 the lower portion of the polymeric sheet on an opposing side from the stiffener sheet.

1 18. The valve of Claim 17, wherein an outer edge of the second stiffener sheet
2 overlaps the inner diameter of the annulus on one end thereof to thereby compress an
3 outer circumferential edge of the polymeric sheet against the one end of the annulus.